

# AMERICAN SCIENTIST

## *Index for Volume 47, 1959*

### AUTHOR AND ANNOUNCEMENT INDEX

- Barker, J. W. A Challenging Project; Sept., 216A.
- Basic Research, Symposium; Sept., 206A.
- Blackett, P. M. S. Non-Conservation of Parity; Dec., 509.
- Blum, H. F. Quantitative Aspects of Cancer Induction & Growth As Illustrated in Carcinogenesis by Ultraviolet Light; June, 250.
- Brown, F. A., Jr. The Rhythmic Nature of Animals & Plants; June, 147.
- Charlton, F. E. Measuring the Temperature of Incubating Penguin Eggs; March, 80.
- Cleveland, F. F. Interlingua—Servitor del Scientia; Sept., 403.
- Cunningham, W. J. Parametric Amplifiers; Dec., 480.
- Dicke, R. H. Gravitation—An Enigma; March, 25.
- Eklund, C. R. Measuring the Temperature of Incubating Penguin Eggs; March, 80.
- Ginsburg, V. New Data on the Chemical Composition of Cosmic Rays; Dec., 562.
- Gordon, R. B. Color Centers in Crystals; Sept., 361.
- Gulliksen, H. Mathematical Solutions for Psychological Problems; June, 178.
- Harlow, H. F. The Development of Learning in the Rhesus Monkey; Dec., 459.
- Huang, S.-S. Occurrence of Life in the Universe; Sept., 397.
- Ingle, D. Current Status of Adrenocortical Research; Sept., 413.
- Johansen, M. The Johansen System of Digital Notation; Dec., 310A.
- Kennedy, G. C. The Origin of Continents, Mt. Ranges & Ocean Basins; Dec., 491.
- Killian, J. R., Jr. (Chairman). Strengthening American Science; June, 264.
- King, P. Speculations on Atmospheric Processes Via Fission Product Levels; Sept., 386.
- Kopal, Z. Essentials for Mapping the Moon; Dec., 505.
- Lanczos, C. Albert Einstein & the Role of Theory in Contemporary Physics; March, 41.
- Landé, A. Quantum Mechanics, from Duality to Unity; Sept., 341.
- Le Gros Clark, W. E. The Crucial Evidence for Human Evolution; Sept., 299.
- Lindsay, R. B. Entropy Consumption & Values in Physical Science; Sept., 376.
- Lippincott, S. L. Swarthmore Meets Its Local Suppliers of Future Scientists; June, 288.
- Lockhart, L. B., Jr. Speculations on Atmospheric Processes Via Fission Product Levels; Sept., 386.
- Meserve, W. J. Man As Scientist; Sept., 222A.
- Morowitz, H. J. A Model of Reproduction; June, 261.
- Muller, H. J. The Prospects of Genetic Change; Dec., 551.
- Müntzing, A. Darwin's Views on Variation Under Domestication; Sept., 314.
- Oceanography. Introduction & Summary of the Committee's Recommendations; June, 234.
- O'Flaherty, J. C. A Humanist Looks at Max Planck; March, 68.
- Phi Beta Kappa Award in Science; March, 144.
- Prosser, C. L. The "Origin" After A Century: Prospects for the Future; Dec., 536.
- Razoryonov, L. New Data on the Chemical Composition of Cosmic Rays; Dec., 562.
- RESA: Agenda for the Annual Convention, December 1959, Dec., 310A
- New Branches, 310A.
- Report of the 10th Annual Convention, December 1958, March, 6A.
- Report of the Treasurer, 1958; March, 123.
- Standing Committees, Sigma Xi-RESA, Annual Listing; March, 134.
- Rosen, D. Swarthmore Meets Its Local Suppliers of Future Scientists; June, 288.
- Royce, J. R. The Search for Meaning; Dec., 515.
- Schmerl, R. B. The Scientist as Seer; June, 104A.
- Seeger, R. J. Scientist & Poet; Sept., 350.
- Sigma Xi: Agenda for the Annual Convention, December 1959; Dec., 308A.
- Grants-in-Aid, 1959; Sept., 240A.
- National Lectureships, 1959-1960; June, 100A.
- Report of the 59th Annual Convention, December 1958; March, 16A.

- Report of the Treasurer, 1958; March, 120.  
 Standing Committees, Sigma Xi-RESA, Annual Listing; March, 133.  
 Stetson, G. A. (1889-1959); Sept., 325.  
 Strengthening Science & Engineering Education; Sept., 212A.  
 Suits, G. Education & Science; March, 60.  
 Tamm, I. E. Radiation of Particles with Speeds Greater Than That of Light; June, 169.  
 Taylor, H. Report of the Editor-in-Chief; March, 132. Perspectives—Crystal Imperfections & Chemical Reactivity, Part I; Dec., 567.  
 Tsilikis, J. D. Simplicity & Elegance in Theoretical Physics; March, 87.  
 Turkevich, J. The World of Fine Particles; March, 97.  
 Westwater, J. W. Boiling Heat Transfer; Sept., 427.  
 Wetmore, R. H. Morphogenesis in Plants—A New Approach; Sept., 326.  
 Wilson, J. T. Geophysics & Continental Growth; March, 1.  
 Wolken, J. J. The Chloroplast & Photosynthesis—A Structural Basis for Function; June, 202.  
 Woodbury, R. B. Archeological Perspectives on Arid Lands; Dec., 312A.  
 Zettlemoyer, A. C. Molecular Interactions with the Surfaces of Solids; June, 216.

## BOOKS REVIEWED AND AUTHORS' INDEX

### VOLUME 47

- Abbott, D.; June, 154A.  
*Advanced Dynamics* (J. E. Younger); June, 166A.  
*Advances in Geophysics, Vol. V* (H. E. Landsberg & J. Van Miegheem, eds.); Dec., 374A.  
*Aim & Structure of Physical Theory, The* (P. Duhem; P. P. Wiener, trans.); June, 293.  
 Ambartsumyan, V. A., ed.; June, 176A.  
*American Agriculture* (E. Higbee); March, 54A.  
*American High School Today, The* (J. B. Conant); June, 290.  
*Analog Simulation: Solution of Field Problems* (W. J. Karplus); March, 66A.  
*Analysis & Control of Nonlinear Systems* (Y. H. Ku); March, 68A.  
 Anshen, R. N., ed.; Sept., 254A.  
 Arrow, K. J.; Dec., 364A.  
 Artin, E.; June, 176A.  
*Atmospheric Explorations* (H. G. Houghton, ed.); June, 184A.  
 Barnes, H.; Sept., 264A.  
 Barzun, J.; Sept., 451.  
 Basolo, F.; Sept., 272A.  
 Bates, M.; June, 154A.  
 Bateson, G.; March, 90A.  
 Beck, S. D.; June, 291.  
 Beckner, M.; June, 298.  
*Behavior & Evolution* (A. Roe & G. G. Simpson, eds.); June, 192A.  
 Bendat, J. S.; March, 91A.  
 Benesch, R., ed.; Dec., 372A.  
 Berkner, L. V., ed.; March, 72A.  
 Bier, M., ed.; Sept., 286A.  
*Big Molecules* (H. Melville); June, 296.  
*Biographical Memoirs of Fellows of the Royal Society, Vol. IV*; March, 54A.  
*Biological Way of Thought, The* (M. Beckner); June, 298.  
*Birds, The* (O. & K. Heinroth); June, 186A.  
 Blum, H. F.; Dec., 358A.  
*Bone & Radiostrontium* (A. Engström, et al.); June, 180A.  
 Bonner, J. T.; Sept., 296A.  
 Boudart, M., trans.; Sept., 258A.  
 Bovet, D., ed.; Dec., 372A.  
 Bovet-Nitti, F., ed.; Dec., 372A.  
 Brazier, M. A. B., ed.; Sept., 284A.  
 Bronowski, J.; Dec., 356A.  
 Butler, J. A. V., ed.; March, 62A; Sept., 452.  
*California Lands, Ownership, Use & Management* (S. T. Dana and M. Krueger); March, 54A.  
*Canberra Symposium (UNESCO)*; Sept., 290A.  
*Carcinogenesis by Ultraviolet Light* (H. F. Blum); Dec., 358A.  
 Carhart, A. R.; Dec., 376A.  
*Carnegie Institution, Annual Report, Dept. of Terrestrial Magnetism* (M. A. Tuve); Sept., 447.  
 Carslaw, H. S.; Sept., 276A.  
*Cellular & Humoral Aspects of the Hypersensitive States* (H. S. Lawrence, ed.); Sept., 296A.  
*Cellular Slime Molds, The* (J. T. Bonner); Sept., 296A.  
*Central Nervous System & Behavior, The, Transactions of the First Conference* (M. A. B. Brazier, ed.); Sept., 284A.  
*Čerenkov Radiation & Its Applications* (J. V. Jelly); Dec., 382A.  
 Chadwick, J.; June, 196A.  
 Chalmers, B., ed.; Dec., 384A.  
*Chemische Reaktionen in Stosswellen, Vol. III* (E. F. Greene and J. P. Toennies); Sept., 256A.  
*Cholesterol* (D. Kritchevsky); June, 172A.

- Cholesterol: Chemistry, Biochemistry & Pathology* (R. P. Cook, ed.); June, 172A.
- Climatology & Microclimatology, Arid Zone Research* (UNESCO); Sept., 290A.
- Cloudsley-Thompson, J. L.; June, 146A.
- Cloud Study* (F. H. Ludlam & R. S. Scorer); June, 184A.
- Cold Injury*. Transactions of the Fifth Conference (M. I. Ferrer, ed.); Dec., 388A.
- Collecting, Preserving & Studying Insects* (H. Oldroyd); June, 162A.
- Combination of Observations* (W. M. Smart); March, 89A.
- Conant, J. B.; June, 290.
- Conduction of Heat in Solids* (H. S. Carslaw & J. C. Jaeger); Sept., 276A.
- Constant, F. W.; March, 74A.
- Cook, R. P. ed.; June, 172A.
- Coral Island* (M. Bates & D. Abbott); June, 154A.
- Cosmic Electrodynamics* (J. W. Dungey); Sept., 300A.
- Coulson, C. A.; June, 194A.
- Cox, D. R.; June, 182A.
- Cryogenic Engineering* (R. B. Scott); Dec., 376A.
- Cunningham, W. J.; March, 93A.
- Curare & Curare-Like Agents* (D. Bovet, F. Bovet-Nitti & G. B. Marini-Bettolo, eds.); Dec., 372A.
- Curtiss, L. F.; Sept., 294A.
- Dana, S. T.; March, 54A.
- Dangerous Marine Animals* (B. W. Halstead); Sept., 449.
- Dasmann, R. F.; Sept., 288A.
- Davidson, R. L.; June, 147A.
- Davies, Max, ed.; March, 126.
- Davis, E. E., Jr.; March, 127.
- Decipherment of Linear B, The* (J. Chadwick); June, 196A.
- Demeur, M., ed.; Dec., 374A.
- Diderot Pictorial Encyclopedia of Trades & Industry, Manufacturing & Technical Arts in Selected Plates, A* (D. Diderot; C. C. Gillispie, ed.); Sept., 280A.
- Dieckvoss, W.; June, 148A.
- Disease, Life, & Man* (R. Virchow; L. J. Rather, trans.); Sept., 260A.
- Disinfection & Sterilization, Theory & Practice* (G. Sykes); June, 190A.
- Dixon, M.; March, 92A.
- Dr. W. C. Röntgen* (O. Glasser); March, 86A.
- Donaldson, P. E. K.; Dec., 364A.
- Dubos, R.; Sept., 254A.
- Duhem, P.; June, 293.
- Dungey, J. W.; Sept., 300A.
- Ecology of Invasions by Animals & Plants* (C. S. Elton); Sept., 270A.
- Economics of American Forestry* (A. C. Worrell); Sept., 288A.
- Efficiency in Government Through Systems Analysis with Emphasis on Water Resource Development* (R. N. McKean); March, 54A.
- Electronic Apparatus for Biological Research* (P. E. K. Donaldson); Dec., 364A.
- Electrophoresis: Theory, Methods & Applications* (M. Bier, ed.); Sept., 286A.
- Elek, S. D.; Dec., 362A.
- Elementary Number Theory* (E. Landau; J. E. Goodman, trans.); June, 160A.
- Elements of Non-Euclidean Geometry* (D. M. Y. Sommerville); June, 150A.
- Elliptic Integrals* (H. Hancock); June, 150A.
- Elsasser, W. M.; Sept., 274A.
- Elton, C. S.; Sept., 270A.
- Endt, P. M., ed.; Dec., 374A.
- English-Russian, Russian-English Electronics Dictionary* (McGraw-Hill Bk. Co. for the Army); June, 152A.
- Engström, A. et al; June, 180A.
- Environmental Conservation* (R. F. Dasmann); Sept., 288A.
- Enzymes* (M. Dixon & E. C. Webb); March, 92A.
- Etherington, H., ed.; Sept., 278A.
- Experimental Design in Psychology & the Medical Sciences* (A. E. Maxwell); June, 158A.
- Experimental Techniques in Low-Temperature Physics* (G. K. White); Sept., 301A.
- Fenton, C. L.; Dec., 362A.
- Fenton, M. A.; Dec., 362A.
- Ferrer, M. I.; Dec., 388A.
- Field, G., trans.; Sept., 282A.
- Forder, H. G.; June, 150A.
- Forerunners of Darwin: 1745-1859* (B. Glass, O. Temkin & W. Straus, Jr., eds.); Dec., 370A.
- Fossil Book, The* (C. L. Fenton & M. A. Fenton); Dec., 362A.
- Foundations of Embryology* (B. M. Patten); March, 60A.
- Foundations of Euclidean Geometry, The* (H. G. Forder); June, 150A.
- Foundations of Modern Physical Science* (G. Holton & D. H. D. Roller); June, 154A.
- Freshman Honors Course in Calculus & Analytic Geometry* (E. Artin); June, 176A.
- Friedlander, F. G.; March, 60A.
- Frisch, O. R., ed.; June, 166A.
- Frontiers in Cytology* (S. L. Palay, ed.); Sept., 268A.
- Gamow, G.; Sept., 294A.
- Gentle Art of Mathematics, The* (D. Pedoe); June, 296.
- Geology of the Great Lakes* (J. L. Hough); June, 164A.
- Geology of Uranium, The* (Supplement No. 6 of Soviet Journal of Atomic Energy), translated from the Russian; June, 168A.
- Geophysics and the IGY* (H. Odishaw & S. Rittenberg, eds.); March, 88A.
- Gifted Group at Mid-Life, The* (L. M. Terman & M. H. Oden); Dec., 368A.
- Gillispie, C. C., ed.; Sept., 280A.
- Ginsberg, E.; Dec., 380A.
- Glass, B., ed.; Dec., 370A.
- Glasser, O.; March, 86A.
- Goode, C. E.; June, 196A.

- Goodman, J. E., trans.; June, 160A.  
 Graumann, W., ed.; June, 170A.  
 Green, H. L.; March, 70A.  
 Greene, E. F.; Sept., 256A.  
 Greenewalt, C. H.; Sept., 449.
- Haigh, B., trans.; Sept., 258A.  
 Hall, E. R.; Dec., 384A.  
 Halstead, B. W.; Sept., 449.  
 Hancock, H.; June, 150A.  
*Handbuch der Histochemie, Vol. I, Part I: General Methods* (W. Graumann & K. Neumann, eds.); June, 170A.  
 Hannay, N. B., ed.; Dec., 368A.  
 Hanson, N. R.; June, 295.  
 Hauser, P. M., ed.; March, 64A.  
 Hebb, D. O., March, 66A.  
 Heinroth, K. & O.; June, 186A.  
 Heisenberg, W.; Sept., 266A.  
 Heuvelmans, B.; Dec., 378A.  
 Higbee, E.; March, 54A.  
*History of Cytology, A* (A. Hughes); Dec., 392A.  
 Hoag, J. B., ed.; June, 176A.  
 Holton, G.; June, 154A.  
 Hook, S., ed.; Dec., 388A.  
 Hough, J. L.; June, 164A.  
 Houghton, H. G., ed.; June, 184A.  
*House of Intellect, The* (J. Barzun); Sept., 451.  
 Howell, B. F., Jr.; Sept., 274A.  
 Hughes, A.; Dec., 392A.
- Ineffective Soldier, The* (E. Ginsberg, et al.); Dec., 380A.  
 Ingle, D.; Sept., 447.  
*Inside the Living Cell* (J. A. V. Butler); Sept., 452.  
*Introduction to Combinatorial Analysis, An* (J. Riordan); June, 162A.  
*Introduction to Functional Analysis* (A. E. Taylor); Sept., 276A.  
*Introduction to the Geometry of N Dimensions* (D. M. Y. Sommerville); June, 150A.  
*Introduction to Geophysics* (B. F. Howell, Jr.); Sept., 274A.  
*Introduction to Neutron Physics* (L. F. Curtiss); Sept., 294A.  
*Introduction to Nonlinear Analysis* (W. J. Cunningham); March, 93A.  
*Introduction to the Theory of Sound Transmission* (C. B. Officer); March, 60A.  
*Introductory Physics* (H. Priestley); March, 76A.
- Jackson, J. D.; June, 150A.  
 Jaeger, J. C.; Sept., 276A.  
 Jelley, J. V.; Dec., 382A.
- Kaplan, W.; Sept., 266A.  
 Karlin, S.; Dec., 364A.  
 Karplus, W. J.; March, 66A.  
 Katz, B., ed.; March, 62A.  
 Keen, A. M.; Sept., 268A.  
 Kelson, K. R.; Dec., 384A.  
 King, L. S.; March, 84A.  
 King, R., ed.; Dec., 384A.  
 Körner, S., ed.; March, 78A.  
 Kritchevsky, D.; June, 172A.  
 Krueger, M.; March, 54A.
- Kruse, W.; June, 148A.  
 Ku, Y. H.; March, 68A.
- Landau, E.; June, 160A.  
 Landsberg, H. E., ed.; Dec., 374A.  
 Lane, W. R.; March, 70A.  
*Language, Thought, & the Human Mind* (C. A. Lawson); June, 172A.  
 Lawrence, H. S., ed.; Sept., 296A.  
 Lawson, C. A.; June, 172A.  
*Lectures on the Theory of Elliptic Functions* (H. Hancock); June, 150A.  
 Leighton, R. B.; Dec., 386A.  
*Living Resources of the Sea* (L. A. Walford); March, 91A.  
 Ludlam, F. H.; June, 184A.
- MacMillan, Wm. D.; June, 150A.  
*Mammals of North America, The* (E. R. Hall & K. R. Kelson); Dec., 384A.  
 Manheim, R., trans.; June, 148A.  
*Man's World of Sound* (J. R. Pierce & E. E. Davis, Jr.); March, 127.  
*Manual on Rockets & Satellites, Vol. VI, IGY Annals* (L. V. Berkner, ed.); March, 72A.  
*Marine Ecology* (H. B. Moore); March, 92A.  
 Marini-Bettolo, G. B., ed.; Dec., 372A.  
 Mark, M. L.; March, 54A.  
 Mather, K. B.; June, 156A.  
*Matter, Earth & Sky* (G. Gamow); Sept., 294A.  
 Maxwell, A. E.; June, 158A.  
 McCarthy, P. J.; Sept., 276A.  
 McGraw-Hill Bk. Co.; June, 152A.  
 McKean, R. N.; March, 54A.  
*Measurement of Colour, The* (W. D. Wright); March, 89A.  
*Mechanisms of Inorganic Reactions* (F. Basolo & R. G. Pearson); Sept., 272A.  
*Medical World of the 18th Century, The* (L. S. King); March, 84A.  
 Melville, H.; June, 296.  
*Microbiology* (M. J. Pelczar, Jr. & R. D. Reid); March, 62A.  
*Microsomal Particles & Protein Synthesis* (R. B. Roberts, ed.); Dec., 366A.  
*Mind & Matter* (E. Schrödinger); March, 58A.  
*Mirage of Health* (R. Dubos; R. N. Anshen, ed.); Sept., 254A.  
 Moore, H. B.; March, 92A.  
*Morphogenesis: The Analysis of Molluscan Development* (Chr. P. Raven); June, 174A.
- National Forests, The* (A. R. Carhart); Dec., 376A.  
 Naven (G. Bateson); March, 90A.  
 Needham, G. H.; Dec., 382A.  
 Nelson, W. L.; March, 58A.  
*Neomycin* (S. A. Waksman et al. eds.); June, 298.  
 Neuberger, A., ed.; March, 64A.  
 Neumann, K. ed.; June, 170A.  
*Notes of a Soviet Doctor* (G. S. Pondeov; B. Haigh, trans.); Sept., 258A.  
*Nuclear Engineering Handbook* (H. Etherington, ed.); Sept., 278A.

- Nuclear Radiation Detection* (Wm. J. Price); June, 168A.
- Nuclear Reactions* (P. M. Endt & M. Demeur, eds.); Dec., 374A.
- Nuclear Reactor Experiments* (J. B. Hoag, ed.); June, 176A.
- Nuclear Scattering* (K. B. Mather & P. Swan); June, 156A.
- Observations & Interpretations, A Symposium of Philosophers & Physicists* (S. Korner, ed. with M. H. L. Pryce); March, 78A.
- Oceanography & Marine Biology* (H. Barnes); Sept., 264A.
- Oden, M. H.; Dec., 368A.
- Odishaw, H., ed.; March, 88A.
- Officer, C. B.; March, 60A.
- Oldroyd, H.; June, 162A.
- On the Track of Unknown Animals* (B. Heuvelmans); Dec., 378A.
- Operational Research in Practice* (M. Davies & M. Verhulst, eds.); March, 126.
- Ordinary Differential Equations* (W. Kaplan); Sept., 266A.
- Palay, S. L., ed.; Sept., 268A.
- Particulate Clouds* (H. L. Green & W. R. Lane); March, 70A.
- Passive Network Synthesis* (J. E. Storer); March, 90A.
- Patten, B. M.; March, 60A.
- Patterns of Discovery* (N. R. Hanson); June, 295.
- Pauli, W.; Sept., 282A.
- Pearson, E. B.; June, 146A.
- Pearson, R. G.; Sept., 272A.
- Pedoe, D.; June, 296.
- Pelczar, M. J., Jr.; March, 62A.
- Personal Knowledge* (M. Polanyi); March, 125, 52A.
- Personnel Research Frontiers* (C. E. Goode); June, 196A.
- Petroleum Refinery Engineering* (W. L. Nelson); March, 58A.
- Physical Foundation of Biology, The* (W. M. Elsasser); Sept., 274A.
- Physical Theory of Neutron Chain Reactors, The* (A. M. Weinberg & E. P. Wigner); March, 56A.
- Physicist's Conception of Nature, The* (W. Heisenberg); Sept., 266A.
- Physics of Elementary Particles, The* (J. D. Jackson); June, 150A.
- Physiology of Forest Trees, The* (K. V. Thimann et al., eds.); June, 147A.
- Pierce, J. R.; March, 127.
- Planning of Experiments* (D. R. Cox); June, 182A.
- Polanyi, M.; March, 125, 52A; Dec., 356A.
- Polar Atmosphere Symposium, Part I: Meteorology* (R. C. Sutcliffe, ed.); Sept., 290A.
- Pondoev, G. S.; Sept., 258A.
- Pontecorvo, G.; June, 156A.
- Population & World Politics* (P. M. Hauser, ed.); March, 64A.
- Practical Use of the Microscope Including Photomicrography, The* (G. H. Needham); Dec., 382A.
- Prentice-Hall World Atlas, The* (J. E. Williams, ed.); March, 88A.
- Price, Wm. J.; June, 168A.
- Priestley, H.; March, 76A.
- Principles & Applications of Random Noise Theory* (J. S. Bendat); March, 91A.
- Principles of Modern Physics* (R. B. Leighton); Dec., 386A.
- Principles of Research in Biology & Medicine* (D. Ingle); Sept., 447.
- Progress in Biophysics & Biophysical Chemistry, Vol. VIII* (J. A. V. Butler & B. Katz, eds.); March, 62A.
- Progress in Metal Physics, Vol. VII* (B. Chalmers & R. King, eds.); Dec., 384A.
- Progress in Nuclear Physics, Vol. VI* (O. R. Frisch, ed.); June, 166A.
- Pryce, M. H. L., collaborator; March, 78A.
- Psychoanalysis, Scientific Method, & Philosophy* (S. Hook, ed.); Dec., 388A.
- Rather, L. J., trans.; Sept., 260A.
- Raven, Chr. P.; June, 174A.
- Reid, R. D.; March, 62A.
- Research on Power from Fusion & Other Major Activities in the Atomic Energy Programs, 1958*; June, 178A.
- Riordan, J.; June, 162A.
- Roberts, R. B., ed.; Dec., 366A.
- Robeson, P., Jr., ed.; June, 195A.
- Roe, A. ed.; June, 192A.
- Roller, D. H. D.; June, 154A.
- Romer, A. S.; Sept., 270A.
- Royal Society Biographical Memoirs, Vol. IV*; March, 54A.
- Russian-English Glossary of Electronics & Physics* (P. Robeson, Jr., ed.); June, 195A.
- Russian for the Scientist* (J. & L. Turkevich); Sept., 258A.
- Russian Literature on Satellites, Part I*; June, 152A.
- Ruttenberg, S., ed.; March, 88A.
- Safe Handling of Radioisotopes*; June, 170A.
- Sampling Opinions* (F. F. Stephan & P. J. McCarthy); Sept., 276A.
- Scarf, H.; Dec., 364A.
- Schrödinger, E.; March, 58A.
- Science & Human Values* (J. Bronowski); Dec., 356A.
- Science & the Idea of God* (C. A. Coulson); June, 194A.
- Scorer, R. S.; June, 184A.
- Scott, R. B.; Dec., 376A.
- Sea Shells of Tropical West America* (A. M. Keen); Sept., 268A.
- Semenov, N. N.; Sept., 258A.
- Semiconductors* (N. B. Hannay, ed.); Dec., 368A.
- Simplicity of Science, The* (S. D. Beck); June, 291.
- Simpson, G. G. ed.; June, 192A.
- Smart, W. M.; March, 89A.
- Snow, C. P.; Dec., 356A.

- Some Problems in Chemical Kinetics & Reactivity, Vol. II* (N. N. Semenov; M. Boudart, trans.); Sept., 258A.
- Sommerville, D. M. Y.; June, 150A.
- Sound Pulses* (F. G. Friedlander); March, 60A.
- Soviet Pharmaceutical Research, Vol. III: Medicinal Chemistry*; June, 188A.
- Spiders, Scorpions, Centipides & Mites* (J. L. Cloudsley-Thompson); June, 146A.
- Staphylococcus Pyogenes & Its Relation to Disease* (S. D. Elek); Dec., 362A.
- Stars, The* (W. Kruse & W. Dieckvoss; R. Manheim, trans.); June, 148A.
- Statistics in the Making* (M. L. Marks); March, 54A.
- Stephan, F. F.; Sept., 276A.
- Storer, J. E.; March, 90A.
- Straus, W., Jr., ed.; Dec., 370A.
- Strauss, L.; June, 164A.
- Studies in the Mathematical Theory of Inventory & Production* (K. J. Arrow, S. Karlin, & H. Scarf); Dec., 364A.
- Study of Man, The* (M. Polanyi); Dec., 356A.
- Successful Process Plant Practices* (R. L. Davidson); June, 147A.
- Sulfur in Proteins* (R. Benesch et al. eds.); Dec., 372A.
- Sutcliffe, R. D., ed.; Sept., 290A.
- Swan, R.; June, 156A.
- Sykes, G.; June, 190A.
- Sykes, J. B., trans.; June, 176A.
- Symposium on Information Theory in Biology, Oct., 1956* (H. P. Yockey et al., ed.); June, 160A.
- Symposium on Protein Structure* (A. Neuberger, ed.); March, 64A.
- Taylor, A. E.; Sept., 276A.
- Technology of Instrumentation* (E. B. Pearson); June, 146A.
- Temkin, O., ed.; Dec., 370A.
- Terman, L. M.; Dec., 368A.
- Textbook of Psychology, A* (D. O. Hebb); March, 66A.
- Theoretical Astrophysics* (V. A. Ambartsumyan, ed.; J. B. Sykes, trans.); June, 176A.
- Theoretical Physics* (F. W. Constant); March, 74A.
- Theory of the Potential, The* (Wm. D. MacMillan); June, 150A.
- Theory of Relativity* (W. Pauli; G. Field, trans.); Sept., 282A.
- Thimann, K. V., ed.; June, 147A.
- Thoughts on Machiavelli* (L. Strauss); June, 164A.
- Toennies, J. P.; Sept., 256A.
- Trends in Genetic Analysis* (G. Pontecorvo); June, 156A.
- Turkevich, J. & L.; Sept., 258A.
- Tuve, M. A.; Sept., 447.
- Two Cultures & the Scientific Revolution, The* (C. P. Snow); Dec., 356A.
- Uncommon Man, The* (C. H. Greenewalt); Sept., 449.
- Van Mieghem, J., ed.; Dec., 374A.
- Verhulst, M., ed.; March, 126.
- Vertebrate Story, The* (A. S. Romer); Sept., 270A.
- Virehow, R.; Sept., 260A.
- Waksman, S. et al., eds.; June, 298.
- Walford, L. A.; March, 91A.
- Webb, E. C.; March, 92A.
- Weinberg, A. M.; March, 56A.
- White, G. K.; Sept., 301A.
- Wiener, P. P., trans; June, 293.
- Wigner, E. P.; March, 56A.
- Williams, J. E., ed.; March, 88A.
- Worrell, A. C.; Sept., 288A.
- Wright, W. D.; March, 89A.
- Yockey, H. P., ed.; June, 160A.
- Younger, J. E.; June, 166A.

## REVIEWERS' INDEX

### VOLUME 47

- Baker, R. A.; March, 58A; June, 190A.
- Bargmann, V.; Sept., 282A.
- Barker, R. C.; Dec., 386A.
- Barschall, H. H.; Dec., 374A.
- Berenson, C.; June, 147A.
- Berger, F. M.; June, 298.
- Billingham, R. E.; Sept., 296A.
- Blank, A. A.; June, 178A.
- Bonini, Wm. E.; Sept., 274A.
- Boudart, M.; Sept., 258A.
- Bourret, R.; Sept., 284A.
- Brown, W. L., Jr.; June, 192A; Dec., 384A.
- Clement, P. R.; March, 93A.
- Cobb, P. R.; March, 68A.
- Cochran, W. G.; June, 182A.
- Cohen, S. S.; March, 92A.
- Cooper, K. W.; June, 162A.
- Costello, D. P.; June, 174A.
- Cunningham, W. J.; March, 60A; 66A; Sept., 266A; 276A.
- Davis, R. L.; March 89A; June, 160A; 162A.
- DeBenedetti, S.; June 150A.
- Dicke, R. H.; Dec., 382A.
- Drews, R. A.; March, 90A.
- Dunn, F.; June, 154A.
- Dutro, J. T., Jr.; Dec., 362A.
- Edsall, J. T.; Sept., 286A.
- Fairbank, H. A.; Sept., 301A.



- Field, G. B.; June, 176A; 195A; Sept. 294A; 300A.  
 Fitch, V. L.; June, 168A.  
 Friedmann, H.; June, 186A.  
 Gagné, R. M.; Dec., 380A.  
 Gerard, E. O.; June, 172A.  
 Gingold, K.; June, 152A.  
 Glasstone, S.; March 56A.  
 Gorin, G.; Dec., 372A.  
 Graham, H. W.; Sept., 264A.  
 Greene, J. C.; Dec., 370A.  
 Gregg, J. R.; June, 298.  
 Guild, W. R.; March, 62A.  
 Gunning, R. C.; June, 150A.  
 Hitchcock, S. W.; June, 146A.  
 Honig, R. E.; Dec., 368A.  
 Hudson, R. P.; Dec., 376A.  
 Husband, R. W.; June, 196A.  
 Irving, J. T.; March, 84A.  
 Jordan, E. D.; June, 176A.  
 Kauffman, G. B.; Sept., 272A.  
 Kauzmann, W.; Dec., 358A.  
 Koelle, G. B.; Dec., 372A.  
 Kohn, A. J.; June, 154A; Sept., 268A.  
 Leavitt, G. S.; March, 66A.  
 Lichtenstein, P. R.; June, 148A.  
 Ludwig, B. J.; June, 172A.  
 MacAllister, A. T.; June, 164A.  
 MacClintock, P.; March, 88A.  
 Maffei, R. B.; Dec., 364A.  
 Magnuson, G. D.; March, 74A.  
 Major, J. K.; June, 156A; 166A.  
 McCue, J. J. G.; Dec., 364A.  
 Moog, F.; March, 60A.  
 Mudd, S.; Dec., 362A.  
 Muldower, L.; March, 86A; Dec 384A.  
 Mulligan, J. F.; June, 194A.  
 Oakley, H. T.; June, 196A.  
 O'Konski, C. T.; March, 70A.  
 Oppenheimer, J.; March, 58A.  
 Oster, G.; March, 64A.  
 Pestka, S.; Dec., 388A.  
 Pierce, E. L.; March, 91A; 92A.  
 Plutchik, R.; June, 158A.  
 Pollister, A. W.; Sept., 268A.  
 Porter, R. W.; March, 72A.  
 Raper, K. B.; Sept., 296A.  
 Ravin, A. W.; June, 156A.  
 Reed, C. I.; Dec., 378A.  
 Reiner, J. M.; June, 160A; Dec., 366A.  
 Reynolds, G. T.; March, 88A.  
 Richards, O. W.; March, 89A; Dec., 382A.  
 Rugh, R.; June, 180A.  
 Sagi, P. C.; March, 64A.  
 Sampson, E.; June, 168A.  
 Saperstein, A. M.; Sept., 266A.  
 Schweber, S. S.; March, 78A.  
 Sears, P. B.; March, 54A; Sept., 288A.  
 Simpson, G. G.; Sept., 270A.  
 Skehan, J. W.; June, 164A.  
 Slepian, P.; March, 90A.  
 Smith, C. S.; Sept., 280A.  
 Smith, P. F.; March, 62A.  
 Stoller, D. S.; Sept., 276A.  
 Street, R. E.; June, 152A.  
 Thyagarajan, B. S.; June, 188A.  
 Tuteur, F. B.; June, 146A.  
 Usher, T.; March, 91A.  
 Von Borstel, R. C.; Dec., 392A.  
 Walker, E. R.; March, 76A; June, 184A; Sept., 290A; Dec., 374A.  
 Walker, L. C.; June, 147A.  
 Wangersky, P. J.; Sept., 270A; 274A.  
 Weller, L. A.; June, 166A; Sept., 294A.  
 Wende, C. W. J.; Sept., 278A.  
 Whipple, A. O.; Sept., 260A.  
 Winthrop, H.; Dec., 368A.  
 Wolbach, R. A.; Dec., 388A.  
 Young, F. N.; Dec., 376A.  
 Zimm, B.; March, 70A.

# Index to Advertisers

Please mention the AMERICAN SCIENTIST  
when you are writing to an advertiser

	Page		Page
ALCONOX, INC.	389A	LOUIS LEVIN & SON, INC.	381A
ALLIED CHEMICAL CORPORATION, General Chemical Division	313A	LOCKHEED MISSILES & SPACE DIVISION	352A, 353A
ALLIED RADIO CORPORATION	394A	LONG ISLAND BIOLOGICAL ASSOCIATION	398A
AMERICAN ASSOCIATION FOR THE ADVANCE- MENT OF SCIENCE	399A	JOSIAH MACY, JR. FOUNDATION	387A
AMERICAN INSTITUTE OF PHYSICS	385A	MELPAR, INC.	343A
AMERICAN OPTICAL COMPANY	304A	MERCK & COMPANY, INC.	371A
ARNOLD ENGINEERING COMPANY	311A	MILLIFORE FILTER CORPORATION	315A
BATTELLE MEMORIAL INSTITUTE	395A	MISSILES & SPACE SYSTEMS, Division of United Aircraft Corporation	342A
BAUSCH & LOMB OPTICAL COMPANY	303A, 314A	MONROE MICROSCOPE SERVICE	396A
BECKMAN INSTRUMENTS, Scientific-Process Division	379A	THE C. V. MOSBY COMPANY	359A
BELL TELEPHONE LABORATORIES	351A	MOTOROLA, INC.	373A
BIOB LABORATORIES, INC.	392A	NEW YORK ACADEMY OF SCIENCES	363A
BURGESS PUBLISHING COMPANY	393A	NORTHROP CORPORATION	333A
BURKE & JAMES, INC.	397A	OLDSMOBILE DIVISION OF GENERAL MOTORS CORPORATION	331A
CAMBRIDGE UNIVERSITY PRESS	400A	OPERATIONS EVALUATION GROUP	395A
CELANESE CORPORATION OF AMERICA	335A	ORENANCE RESEARCH LABORATORY OF PENNSYLVANIA STATE UNIVERSITY	383A
COLORADO SERUM COMPANY	392A	PERGAMON PRESS, INC.	369A
CONSULTANTS BUREAU, INC.	357A	PHOTOVOLT CORPORATION	379A
CORNING GLASS WORKS	321A, 391A	PRINCETON UNIVERSITY PRESS	365A
CRITERION MANUFACTURING COMPANY	309A	THE RAMO-WOOLDRIDGE LABORATORIES	Cover IV
DOERR GLASS COMPANY	319A	RESEARCH LABORATORIES OF UNITED AIRCRAFT CORP.	337A
DONNER SCIENTIFIC COMPANY	325A	RUTGERS UNIVERSITY PRESS	400A
DOUGLAS AIRCRAFT COMPANY, INC.	391A	SANBORN COMPANY	318A
DOVER PUBLICATIONS	377A	SORENSEN & COMPANY, INC.	367A
EASTMAN KODAK COMPANY	355A	IVAN SORVALL, INC.	324A
EDMUND SCIENTIFIC CORPORATION	390A	SPACE TECHNOLOGY LABORATORIES	341A
ELECTRONIC GUIDE	383A	SPERRY GYROSCOPE COMPANY	345A
ELGEET OPTICAL COMPANY, INC.	307A	SPINCO DIVISION, BECKMAN INSTRUMENTS	Cover III
GENERAL MOTORS RESEARCH LABORATORIES	338A	STANDARD SCIENTIFIC SUPPLY CORPORATION	317A
THE GRAP-APSCO COMPANY	389A	STANFORD UNIVERSITY PRESS	399A
W. A. HAMMOND DRIERITE COMPANY	397A	SYSTEMS CORPORATION OF AMERICA	349A
HARPER AND BROTHERS	393A	TECHNICAL MEASUREMENT CORPORATION	329A
HARVARD APPARATUS COMPANY	381A	TECHNICAL OPERATIONS, INC.	339A
HOFFMANN-LA ROCHE, INC.	328A	TEKTRONIX, INC.	327A
HOUGHTON MIFFLIN COMPANY	385A	UNITRON INSTRUMENT DIVISION of United Scientific Company	323A
INTERNATIONAL BUSINESS MACHINES CORP.	347A	UNIVERSITY OF CALIFORNIA, Department of Correspondence Instruction	399A
ISOMET CORPORATION	394A, 396A	UNIVERSITY OF TEXAS PRESS	387A
ISOTOPES SPECIALTIES COMPANY	397A	D. VAN NOSTRAND COMPANY, INC.	Cover II
KAY ELECTRIC COMPANY	361A	VANTAGE PRESS, INC.	398A
KEITHLEY INSTRUMENTS, INC.	332A	THE WILLIAMS & WILKINS COMPANY	375A
LEA AND FEBIGER	401A		